

# HQS

## Have Quick/1PPS Distribution Amplifier



Brandywine Communication's Havequick/1PPS Distribution Amplifier (HQS) is a small rugged, powered Havequick/1PPS distribution module mounted in a 4" x 4" x 2.5" environmentally secure enclosure. The HQS can provide an MTBF up to 1 million hours depending on configuration.

The HQS was developed to facilitate long cable runs of both 1PPS and Have Quick signals for ships or aircraft requiring these timing reference signals at multiple locations. With the tested, ruggedized enclosure the HQS can be placed in difficult environments and difficult to reach places on ships and aircraft. The unit may be configured for single ended or differential signals as required for the application (factory configured). Various power options are also available upon request. Designed for "fit and forget" operation, the compact, reliable module provides an elegant solution for distribution of the timing references from an embedded military GPS receiver.

## SPECIFICATIONS

### Signal Input:

Connector Type: D38999/20WB35PN  
 1PPS:  
 Amplitude: 0-10V per ICD-GPS-060  
 Impedance: 50ohm  
 Have Quick:  
 Amplitude: 0-5V per ICD-GPS-060  
 Impedance: 2kohm

### Signal Output:

Connector Type: D38999/20WB35SN  
 1PPS:  
 No of Outputs: 1  
 Amplitude: 0-10V per ICD-GPS-060  
 Impedance: 50ohm or low Z  
 Have Quick:  
 No of Outputs: 1  
 Amplitude: 0-5V per ICD-GPS-060  
 Impedance: 2kohm

### Power Input:

Connector Type: D38999/20WA98PN  
 Power Option 1  
 145 VDC to 162 VDC or  
 Power Option 2  
 15 VDC to 36 VDC

**Power Consumption:** <5 Watts.

**Size:** 3.94"x3.94"x2.36" w/o connectors  
 3.94"x5.8"x2.36" incl. connectors

### Reliability

MTBF: >1,000,000 hours

### Environmental

**EMI:** MIL-STD-461 CE102, CS101, CS114, CS116, RE101, RE102, RS101, RS103

### Relative Humidity:

95% relative humidity, non-condensing.

**Operating Temp.:** 0 to +50 °C

### Non-Operating Temp.:

-40 to +85 °C.

**Air Pressure:** to +30,000 feet.

### Fungus & Salt/Fog:

Conformally coated.

### Settling Dust:

Base material coatings and surface treatments resilient to erosion.

### Operational Vibration:

Shipboard Type I MIL-STD-167-1A .

### Transportation Vibration:

MIL-STD-810F Method 514, Procedure I Categories 4, 7, 8, and 10.

### Shock:

MIL-STD-810F [3] Method 516  
 20g/15ms saw tooth pulse.

## Ordering Information

001-0279 MODULE, HQ DISTR., 2 WAY, 162VDC  
 001-0282 MODULE, HQ/1PPS DISTR., 6 WY, 15-36V  
 001-0430 SPLITTER, HQ/1PPS DISTR 6WY RUGGED